

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

**(19) World Intellectual Property Organization
International Bureau**



A standard linear barcode is located at the bottom of the page, spanning most of the width.

(43) International Publication Date
2 August 2001 (02.08.2001)

PCT

(10) International Publication Number
WO 01/54560 A3

(51) International Patent Classification⁷: A61B 1/00

(21) International Application Number: PCT/US01/02499

(22) International Filing Date: 24 January 2001 (24.01.2001)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
09/491,808 28 January 2000 (28.01.2000) US

(71) Applicant: ENDIUS INCORPORATED [US/US]: 23 West Bacon Street, Plainville, MA 02762 (US).

(72) Inventors: DAVISON, Thomas: 83 Farm Hill Road, North Attleboro, MA 02762 (US). SHER, Adam: 30 Juniper Road #43, North Attleboro, MA 02760 (US). DIPOTO, Gene, P.: 23 Crockett Road, Upton, MA 01568 (US). UNGER, John, D.: 20 Farm Hill Road, Wrentham, MA 02093 (US).

(74) Agent: TAROLLI, Thomas, L.; Tarolli, Sundheim, Covell, Tummino & Szabo, 1111 Leader Building, 526 Superior Avenue, Cleveland, OH 44114 (US).

(81) Designated States (national): AL. AM. AT. AU. AZ. BA. BB. BG. BR. BY. CA. CH. CN. CU. CZ. DE. DK. EE. ES. FI. GB. GD. GE. GH. GM. HR. HU. ID. IL. IN. IS. JP. KE. KG. KP. KR. KZ. LC. LK. LR. LS. LT. LU. LV. MD. MG. MK. MN. MW. MX. NO. NZ. PL. PT. RO. RU. SD. SE. SG. SI. SK. SL. TJ. TM. TR. TT. UA. UG. UZ. VN. YU. ZW.

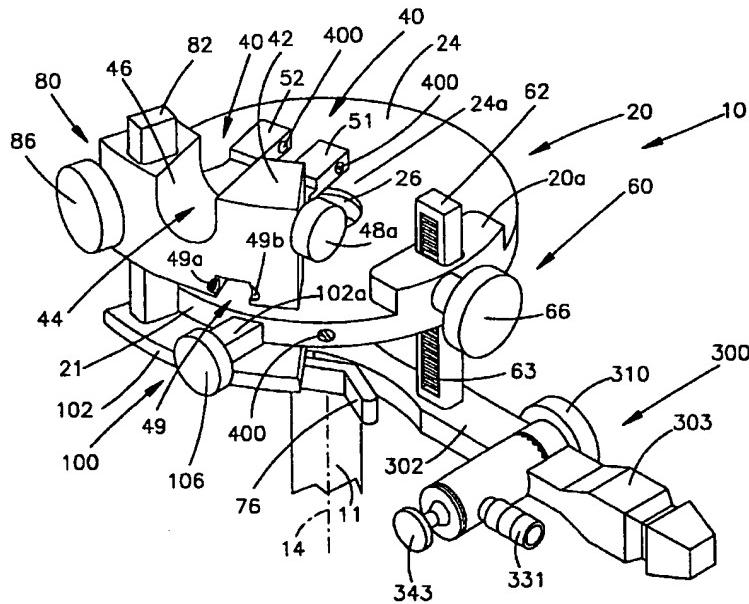
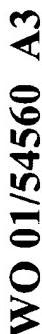
(84) Designated States (regional): ARIPO patent (GH. GM. KE. LS. MW. MZ. SD. SI. SZ. TZ. UG. ZW), Eurasian patent (AM. AZ. BY. KG. KZ. MD. RU. TJ. TM), European patent (AT. BE. CH. CY. DE. DK. ES. FI. FR. GB. GR. IE. IT. LU. MC. NL. PT. SE. TR), OAPI patent (BF. BJ. CF. CG. CI. CM. GA. GN. GW. ML. MR. NE. SN. TD. TG).

Published:
— with international search report

Published:
— *with international search report*

[Continued on next page]

(54) Title: SUPPORT APPARATUS FOR ENDOSCOPIC SURGERY



(57) Abstract: An apparatus (10) for use in percutaneous surgery includes a cannula (11), a first support (20), and a second support (40). The cannula (11) has a channel (12) extending through the cannula (11). The channel (12) has a central axis (14). The first support (20) is associated to the cannula (11) and has a circular perimeter (21) which has a center (22) on the central axis (14). The second support (40) supports a viewing element (200) which extends through the channel (12). The second support (40) is rotatable about the center (22) of the circular perimeter (21) of the first support (20) relative to the first support (20).

BEST AVAILABLE COPY



(88) Date of publication of the international search report: 21 February 2002 *For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US01/02499

A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : A61B 1/00

US CL : 600/102,114

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 600/102,114; 606/130; 604/264

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 5,520,607 A (FRASSICA et al.) 28 May 1996 (28.05.1996).	1
X	US 5,792,044 A (FOLEY et al.) 11 August 1998 11.08.1998).	1-3, 33
X	US 5,571,072 A (KRONNER) 05 November 1996 (05.11.1996).	20

Further documents are listed in the continuation of Box C.

See patent family annex.

* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"T"

later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"E" earlier application or patent published on or after the international filing date

"X"

document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"Y"

document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"O" document referring to an oral disclosure, use, exhibition or other means

"&"

document member of the same patent family

"P" document published prior to the international filing date but later than the priority date claimed

Date of the actual completion of the international search
31 May 2001 (31.05.2001)

Date of mailing of the international search report

02 AUG 2001

Name and mailing address of the ISA/US
Commissioner of Patents and Trademarks
Box PCT
Washington, D.C. 20231
Facsimile No. (703)305-3230

Authorized officer

Linda Dvorak

Telephone No. (703) 308-0858